MASENO UNIVERSITY

UNIVERSITY EXAMINATIONS 2013/2014

SECOND YEAR FIRST SEMESTER EXAMINATIONS FOR BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

(MAIN CAMPUS)

CIT 208: DRIVEN PROGRAMMING

Date: 27th *November, 2013*   *Time:8.30 – 4.30pm*
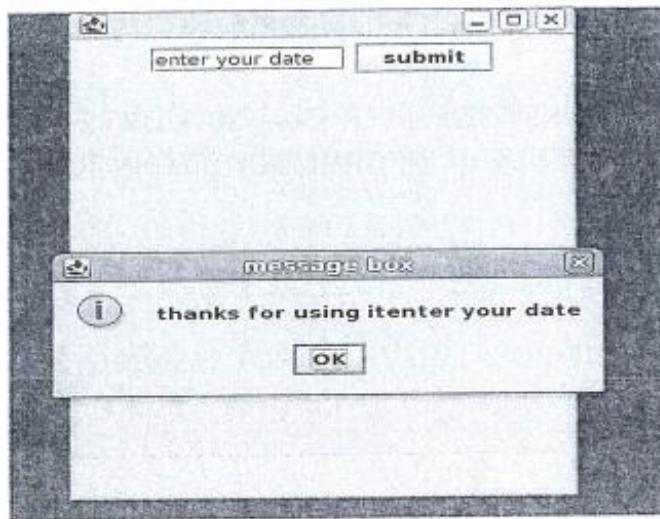
INSTRUCTIONS:

- This question contains five questions. Question One is compulsory.
- Answer any other TWO questions from the remaining four questions.
- Make sure your numbering is the same as it appears on the question paper.

SECTION A (30 MARKS, COMPULSORY)

QUESTION 1:

A) Write a program to display this output. (10 marks)

B) Differentiate between :

    i. a component and a container and give two examples of each (2 marks)

    ii. a frame and a panel   (2 marks)

C) Create 2 menu bars named file and insert. Add the following menu items to the menus. On file,add new,open,save and save as. Under insert,add manual break,header and footer. (8 marks)

D) List the 3 layouts found in the awt package and how they work (3 marks)

    i. FlowLayout

    ii. BorderLayout

    iii. GridLayout

E) Which methods are found in the window listener interface? list and explain each of them with a description of when it should be used. (5 marks)

SECTION B
QUESTION 2 (20 MARKS)

A. Design and code a simple calculator applet that can perform addition, subtraction,multiplication and division on any two numbers. Have two JTextAreas for entering any two integers. Have four JRadioButtons for each arithmetic operation. Let the JRadioButton be in a JbuttonGroup. e.g. when the addition radio button is checked, it takes the two integers, sums them and gives the result in a Jlabel. Have Try - catch to handle exceptions like division by zero which should not be allowed.   (10 marks)

B.   Design a login page that pops up a message box when the submit button fires an event.(10 marks)

QUESTION 3 (20 MARKS)

A. Describe the constructors found in these controls and write a program that contains all of them.(15 marks)

        i.   Button
       ii.   Label
     iii.   Textfield
     iv.   Passwordfield
      v.   Listbox
     vi.   checkbox

B. While writing a program, I would like to implement the action listener interface in my program. What should I do to achieve this?   (5 marks)

QUESTION 4 (20 MARKS)

A. Give the differences available between the three types of layouts found in the layout manager. Write a program that shows the usage of each of them.   (15 marks)

B. Explain how to create a swing timer. How to start it and how to stop it. Give the code snippet that does all this.   (5 marks)

QUESTION 5 (20 MARKS)

A. Write a program that has one main panel, with its background color as red. On the lower panel of the main panel, let it have another panel that contains 3 buttons on it. These three buttons are to be name orange, yellow, cyan. When the orange button is clicked, an orange color should be displayed on the extreme left side of the main panel. When the yellow button is clicked, a yellow color should be displayed at the middle of the main panel and lastly a cyan color should be displayed on the extreme right side of the main panel. If none of these colors can be displayed, the if-else loop should give its output as "an unexpected error occurred".   (20 marks)